

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2004/003637

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01J37/09 H01J37/05 H01J37/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 979 590 A (ANDERSEN ET AL) 7 September 1976 (1976-09-07) abstract column 3, lines 27-63	1, 15, 17
Y		2-7, 10, 11
Y	US 5 065 034 A (KAWANAMI ET AL) 12 November 1991 (1991-11-12) abstract column 2, lines 8-24 column 6, lines 43, 44 figures 3a, 3b, 4, 5, 6a, 6b, 7, 9, 10, 11a, 11b ----- -/-	2, 4, 5, 7, 10

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

14 March 2005

Date of mailing of the international search report

23/03/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 153 441 A (MORIIZUMI ET AL) 6 October 1992 (1992-10-06) abstract column 4, lines 9-17 figures 1,2	2,3,5,7, 10
Y	EP 0 280 375 A (STICHTING TECH WETENSCHAPP; STICHTING VOOR DE TECHNISCHE WETENSCHAPPEN) 31 August 1988 (1988-08-31) abstract column 1, lines 51-55 figures 1-4	4-7,10, 11
Y	US 2 993 993 A (DELONG ARMIN ET AL) 25 July 1961 (1961-07-25) abstract column 1, lines 28-33 column 2, lines 8-13,21-66 figures 1,2	4-7

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national application No.
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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 18
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 18

Claim 18 relies solely on the accompanying figures. No essential technical features being present, a meaningful search is not possible. (Art. 6, Rule. 6.2(a) and R. 6.3 PCT)

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3979590	A	07-09-1976	NL 7404363 A CA 1021883 A1 DE 2512468 A1 FR 2266300 A1 GB 1507366 A JP 50141966 A	03-10-1975 29-11-1977 09-10-1975 24-10-1975 12-04-1978 15-11-1975
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US 5153441	A	06-10-1992	JP 4056210 A	24-02-1992
EP 0280375	A	31-08-1988	NL 8700496 A AT 64491 T DE 3863199 D1 EP 0280375 A1 GR 3002128 T3 JP 63226864 A US 4880294 A	16-09-1988 15-06-1991 18-07-1991 31-08-1988 30-12-1992 21-09-1988 14-11-1989
US 2993993	A	25-07-1961	DE 1125566 B GB 881094 A NL 113488 C	15-03-1962 01-11-1961